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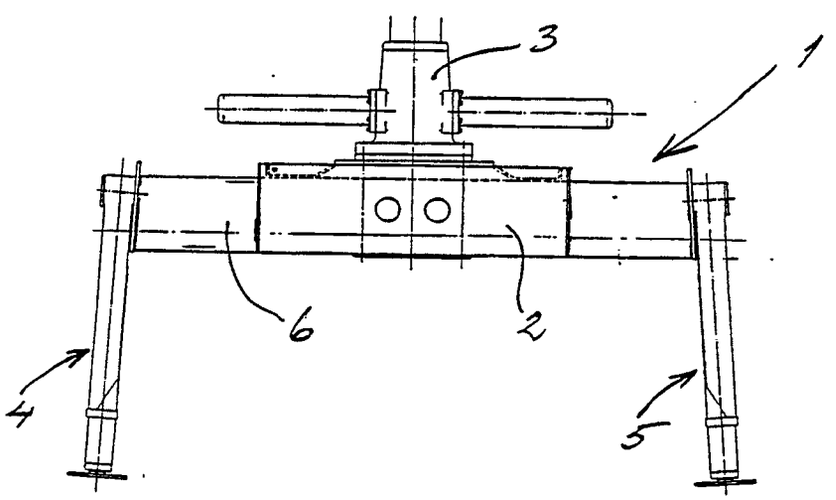
(54) Stabilizer beam with supporting legs.

(57) This invention relates to a stabilizer beam with supporting legs intended to be applied to a vehicle for fastening a lifting crane on or at the same, the device when mounted comprises an essentially horizontal, hollow beam and two supporting legs, the longitudinal direction of which is approximately perpendicular to the longitudinal direction of the beam, and the supporting legs being able to be moved in relation to the hollow beam. According to the invention the two supporting legs (4,5) are connected by a beam (6), which goes through and is displaceably arranged in the hollow beam (2), which means that when the beam (6) connecting the two supporting legs (4,5) is displaced in relation to the hollow beam (2), the one supporting leg (5) will be moved towards the hollow beam (2) in the longitudinal direction of this one, while the other supporting leg (4) will be moved away from the hollow beam (2) in the longitudinal direction of this one, and vice versa.

Fig. 1



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Stabilizer beam with supporting legs.

This invention relates to a stabilizer beam with supporting legs intended to be applied to a vehicle for fastening a lifting crane onto or at the same, the device when mounted and when the vehicle has taken an essentially horizontal position comprising an essential horizontal, hollow beam and two supporting legs, the longitudinal direction of which is approximately perpendicular to the longitudinal direction of the beam, and the supporting legs being able to be moved in relation to the hollow beam.

Such a stabilizer beam with supporting legs is nowadays mounted on many truck equipages used for timber transports. In that connection the stabilizer beam with supporting legs is provided with a lifting crane and as a rule is indirectly via a bracket detachably mounted on the rear portion of the truck frame, whereby the lifting crane can serve not only the loading space of the truck but also the loading space of a trailer of the truck.

Each supporting leg of some of the known devices is in its upper end provided with a beam which is insertable into and extractable out of the previously mentioned hollow beam. In that connection each supporting leg as a rule is operated in that way that the beams of the supporting legs are inserted into and extracted out of the hollow, stationary beam at the same time. This is made by means of two hydraulic cylinders, one for each device, which is an unnecessarily expensive solution.

The stationary, hollow beam has to be made long in order to be able to receive the two beams of the supporting legs. In spite of this fact that part of the beam of the supporting leg which in the extracted position is left inside the stationary, hollow beam is small, and therefore the support becomes bad between the beam of the supporting leg and the stationary, hollow beam. In order to reduce that drawback to some extent both the stationary, hollow beam and the beam of the supporting leg are overdimensioned.

Another drawback with the known device is that the detachment of the device and the lifting crane from and the fastening of the device and the lifting crane on the truck equipage is a troublesome procedure, since due to the long, hollow beam the trailer has to be detached from the truck itself, which is time-consuming. The detachment and fastening of the device is common since due to that fact it is possible to make the timber load larger without exceeding allowed weight limits.

This invention relates to remove the problems with known technique and offer a stabilizer beam with supporting legs, which is simplier regarding the construction and more inexpensive to produce than the devices known in the market. Furthermore, it is not necessary to detach the trailer from the vehicle when detaching and fastening the device. This has been made possible by a stabilizer beam with supporting legs of the kind mentioned by way of introduction which is characterized in that the two supporting legs are connected by a beam going through and being displaceably arranged in the hollow beam, which means that when the beam connecting the two supporting legs is displaced in relation to the hollow beam, the one supporting leg will be moved towards the hollow beam in the longitudinal direction of this one, while the other supporting leg will be moved away from the hollow beam in the longitudinal direction of this one, and vice versa. Due to that fact only one hydraulic plunger cylinder is necessary for operating the two supporting legs being integral parts of the device. Furthermore, the hollow beam intended to be mounted on the truck frame can be made substantially shorter than according to known technique. In spite of this fact the support between the hollow beam and the beam of the supporting legs becomes better than with known technique. This leads to a considerably more stable stabilizer beam with supporting legs and has the consequence that the beams being integral part of the device do not need to be overdimensioned, which also reduces the production costs of the device.

A preferred embodiment of the invention shall now be described more closely with reference to the accompanying drawing, where figure 1 shows a view of the new stabilizer beam with supporting legs in an inactive position, and figure 2 shows a corresponding view of the device in one of two active positions.

Referring to figure 1 is shown there the new stabilizer beam with supporting legs 1. This device is preferably intended to be mounted on a vehicle, for instance a truck. In that connection a hollow beam 2 is fastened directly or indirectly via a bracket or similar on the frame of a truck and preferably on the rear part of the frame. On or at this beam 2 is a lifting crane intended to be mounted. With the digit 3 in Figure 1 is shown a means for the lifting crane, which means is turnable in relation to the beam 2.

The device further comprises two supporting legs 4,5 for the lifting crane, which are placed on each side of the beam 2 and are connected by a beam 6, which goes through the hollow beam 2 and is displaceably arranged in this one. The beam 6 is fastened in the upper portions of the supporting legs 4,5. The beams 2,6 have an essentially horizontal extension in the normal case.

The supporting legs 4,5, the purpose of which is to be in contact with a bed, have a longitudinal direction which is approximately perpendicular to the longitudinal direction of the beams 2,6. With approximately in this connection is meant that the supporting legs may have a direction that deviates up to about ten degrees from the verticle line. Preferably the angle to the verticle line is about five degrees.

As is apparent from Figure 1 the length of the hollow beam 2 is substantially less than the length of the beam 6. Preferably the length of the beam 2 is about the half of the length of the beam 6. In the inactive position according to Figure 1 the supporting legs are placed at essentially the same distance from respective end of the beam 2.

In Figure 2 is shown the new stabilizer beam with supporting legs in one of its two active positions. It is namely in that way that a stabilizer beam with supporting legs and with a lifting crane that is mounted on a truck shall be able to be used when loading timber or pulp wood from both sides of the truck. Therefore, the beam 6 connecting the two supporting legs is displaceably arranged in the beam 2 between two end positions. In Figure 2 is shown the one end position, the beam 6 being displaced towards the left so far in the figure that the right supporting leg 5 is in contact with the one end of the beam 2. Thus, in this case the supporting leg 4 is intended to be utilized, and loading or unloading shall accordingly be made on that side of the vehicle where the supporting leg 4 is placed. If loading shall be made on the other side of the vehicle, the beam 6 is displaced to its other end position, i.e. towards the right in Figure 2, the supporting leg 5 being utilized. In both loading cases the whole beam 2 provides a support for that part of the beam 6 which is positioned inside the beam 2. That means that the beam 2 even if it is short as shown in the figures provides a good support for the beam 6 in the mentioned loading and unloading positions.

In order that the supporting legs 4,5 in all positions when they are active shall be able to reach the ground, they have a telescopic design. Thus, the supporting legs 4,5 comprise a lower part 7 that can be extracted out of and inserted into a upper part 8. It is, of course, possible to modify the supporting legs so that instead of being made in two pieces, they are made in three or four pieces.

To sum up the invention the following adventages with this novel stabilizer beam with supporting legs are achieved in relation to known technique:

I. The design of the new stabilizer beam with supporting legs results in that the hole lifting crane on which the truck driver is sitting during loading and unloading of timber logs becomes very stable which is extremely positive for the driver.

II. The stabilizer beam with the supporting legs becomes more inexpensive to produce and gets a lower weight, since partly only one hydraulic cylinder is required for the movement of the beam 6 in relation to the beam 2, partly small dimensions on the beams 2 and 6 are allowed.

III. The new construction with a very short beam 2 results in a simplier detachment of the device and a lifting crane from the truck equipage and a simplier mounting of a device and a lifting crane on the truck equipage, since these moments can be made without loosening the trailer from the equipage. Moreover, that fact that the beam 2 is short contributes to the weight saving.

The invention is of course not limited to the mentioned and embodiment but can be modified within the scope of the following claims. For instance may the stabilizer beam with the supporting legs be mounted directly on the truck frame instead of in accordance with common technique be mounted on a bracket which in its turn is detachably mounted on the truck frame.

In the text the word "device" has been used. with "device" is meant the same as "stabilizer beam with supporting legs".

Claims

1. A stabilizer beam with supporting legs intended to be applied to a vehicle for fastening a lifting crane on or at the same, the device when mounted and when the vehicle has taken an essentially horizontal position, comprises an essentially horizontal, hollow beam and two supporting legs, the longitudinal direction of which is approximately perpendicular, to the longitudinal direction of the beam, and the supporting legs being able to be moved in relation to the hollow beam, **characterized** in that the two supporting legs (4,5) are connected by a beam (6), which goes through and is displaceably arranged in the hollow beam (2), which means that when the beam (6) connecting the two supporting legs (4,5) is displaced in the relation to the hollow beam (2), the one supporting leg (5) will be moved towards the hollow beam (2) in the longitudinal direction of this one, while the other supporting leg (4) will be moved away from the hollow beam (2) in the longitudinal direction of this one, and vice versa.

2. A stabilizer beam with supporting legs according to claim 1, **characterized** in that the hollow beam (2) has a length which is about the half of length of the beam (6) which connects the two supporting legs (4,5).

3. A stabilizer beam with supporting legs according to claim 1 or 2, **characterized** in that the

supporting legs (4,5) are telescopically designed so that their length is adjustable.

4. A stabilizer beam with supporting legs according to claim 3, **characterized** in that each supporting leg (4,5) is made in two pieces, and that its lower part (7) is intended to be extracted out of and be inserted into the upper part (8).

Fig. 1

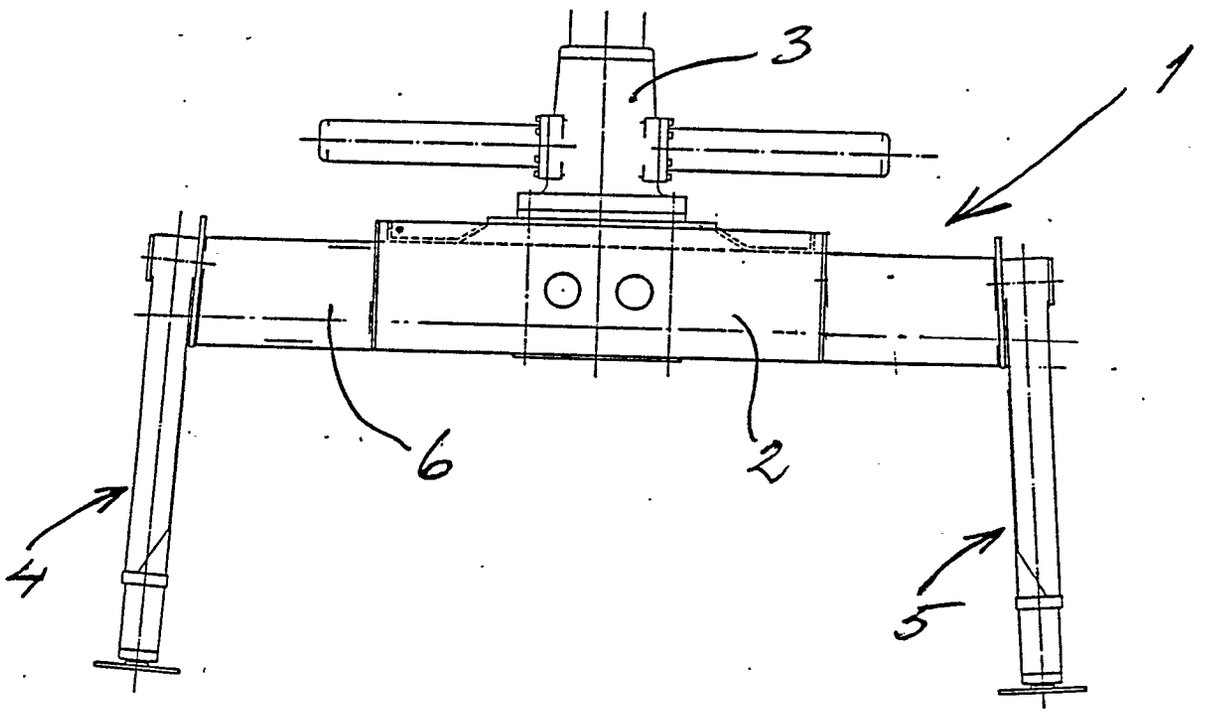
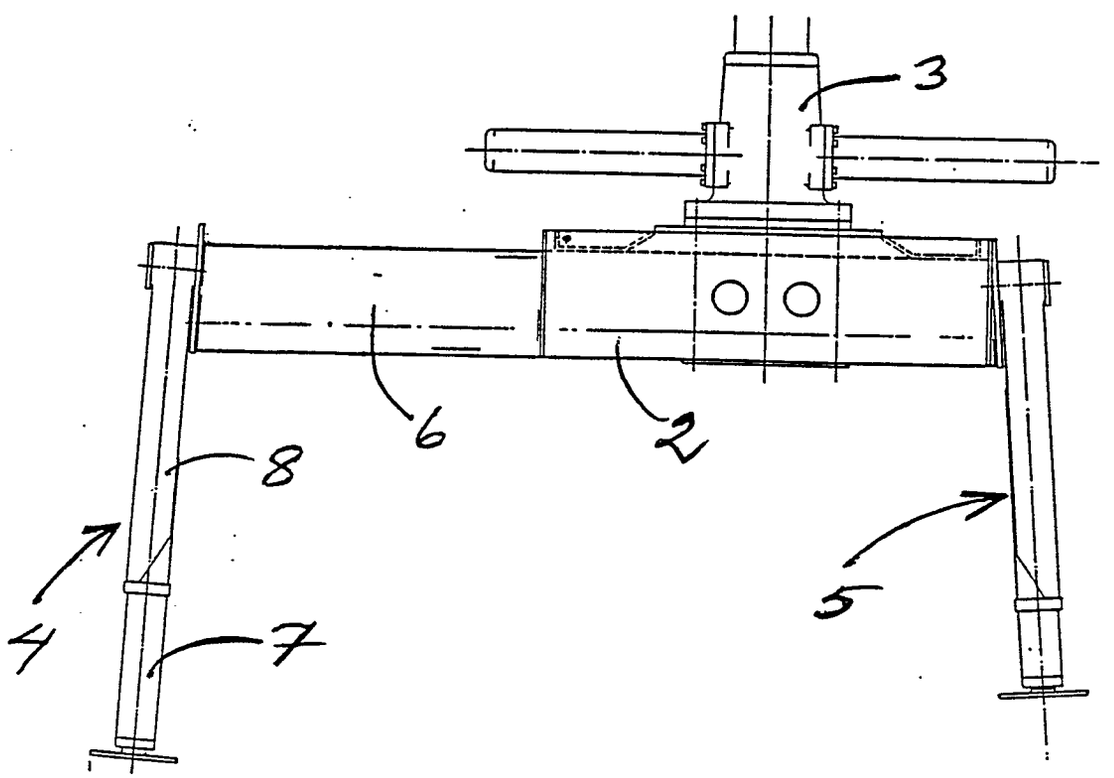


Fig. 2



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EUROPEAN SEARCH REPORT

Application Number

EP 90 85 0161

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
X	DE-U-1 824 235 (MUELLER & CO.) * page 4, line 20 - page 5, line 19; figures 1,2 *	1,3	B 60 P 1/64
X	US-A-3 623 621 (F.T. TARRANT) * figures 4,5 *	3,4	

TECHNICAL FIELDS SEARCHED (Int. Cl.5)

B 60 P

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
BERLIN	18-07-1990	LUDWIG H J

CATEGORY OF CITED DOCUMENTS

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